

Ivan BOULE, *et al.*
Serial No. 10/589,239
October 27, 2009

REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

In response to the Examiner's comments concerning the earlier submitted IDS, it is noted that in spite of the office action summary indication to the contrary, no returned copy of the earlier submitted Form PTO/SB/08a was received by the undersigned. In any event, a fresh Form PTO/SB/08a and another copy of the non-U.S. patent references are attached, together with the IDS Fee for this stage of prosecution. Official consideration and citation of such references including the international search report is respectfully requested. In this regard, it is noted that MPEP §609 makes it clear that there is no requirement that the submitted information must be prior art references in order to be considered by the Examiner.

It is also noted that the Examiner has cited the earlier disclosed U.S. Patent reference to McMahon (5,784,699) and thus it is no longer included.

As required, a new, more descriptive title has been effected by the above amendments.

Claims 39 and 47 have now been cancelled without prejudice or disclaimer, thus mooted formality-based objections to these claims.

In response to the formality-based objections based on alleged lack of proper antecedent bases for various phrases in claims 1-5, 9-13, 17-19, 28, 29, 32-36 and 38,

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these claims have been amended so as to avoid recitations including “the” as an introductory preposition, thus also mooted these grounds for objection.

In response to the rejection of claims 1-16, 35-37 and 40-47 under 35 U.S.C. §112, second paragraph, these claims have been amended so as to avoid recitation of “their” and to make a more positive claim limitation recitation of “allocating a free segment,” thus making it clear that such is indeed part of the claimed invention.

In response to the rejection of claims 1-47 under 35 U.S.C. §101, the independent claims have been amended so as to explicitly require the use of the computer having a CPU linked to a digital data memory for processing requests for allocation of memory, etc. Thus, the claimed subject matter is “tied” to a particular machine. Furthermore, the processing that takes place within a computer inherently changes the state of many physical substances. For example, the state of magnetizable media is inherently changed whenever data is stored therein. The physical state of silicon circuits of various kinds including registers, logic units, amplifiers, memory cells, etc., is also inherently changed at each clock cycle of the computer. Indeed, computers were probably first known as “state machines” before they were known as “computers” for precisely this reason.

Accordingly, the claimed subject matter is believed to qualify as statutory potentially patentable subject matter under at least two categories of statutory subject matter under 35 U.S.C. §101.

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The rejection of claims 1, 27-34 and 40-43 under 35 U.S.C. §102 as allegedly anticipated by Wilson, *et al.* and the rejection of claims 1-7, 9-11, 17-18, 23, 26, 35-39 and 44-47 under 35 U.S.C. §102 as allegedly anticipated by McMahon '699 are both respectfully traversed – as are all other rejections under 35 U.S.C. §103 alleging “obviousness” of claims 8, 12-16 and 19-22.

It is noted that original dependent claims 10 and 25 have only been rejected due to alleged anticipation by McMahon '699. Since independent claims 1 and 17 have now been amended so as to incorporate, respectively, the limitations of claims 10 and 25 (which claims 10 and 25 have been cancelled without prejudice or disclaimer), and since the only remaining independent claims are claims 1 and 17, the following response only discusses in detail the allegations of anticipation by McMahon '699 for original dependent claims 10 and 25 (now independent claims 1 and 17). Applicants specifically reserve the right to provide additional detailed reasons for traversal of all outstanding grounds of rejection should the opportunity or need arise in future contexts. However, for the moment, all such other grounds of rejection have been mooted by the above amendments and, thus, do not require further elaboration at this moment – thereby eliminating unnecessary burden on the record in the present application.

As just noted, claim 1 has been amended to include the features of cancelled dependent claim 10. Claim 17 has been amended to include the features of cancelled

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dependent claim 25. Claims 27 and 38 have been amended to become dependent claims.

The term "allocated to" at line 4 of claim 1 has been replaced with "associated with". The "granule size" feature has been deleted from claim 17. New claim 48 has been added which is directed to this feature. Various additional clarifying amendments have also been made to claims 1 and 17.

The Examiner rejected claim 10 (now amended claim 1) as allegedly anticipated by McMahon. In particular, the Examiner asserts that McMahon teaches a lookup table used to determine the lowest of a number of levels containing a segment of a size equal to or larger than a requested memory block. In doing so, the Examiner relies upon McMahon at 2:42-46 and step 110, Fig. 2.

The Examiner's assertions are perhaps not understood. The penultimate paragraph in McMahon at col. 2 (which includes lines 42-46) relates to a size-based free lists technique which envisages separate lists for free memory blocks of different pre-determined sizes. For example, the sizes may be 16, 32, 64, 128, 256 bytes, etc.

This feature, arguably, corresponds to segments of data memory associated with different levels, as recited in the first integer of claim 1. Also, this feature may be relevant to some additional recitations of claims 3 and 4, *per se*, as indicated by the Examiner in sections 42 and 43 of the office action.

However, e McMahon teaching bears no relation to applicants' lookup table that is used to determine the lowest of a number of levels containing a segment of a size equal to or larger than the requested memory block. McMahon at 2:42-46 explains how to predefine different memory block sizes, each block size corresponding to a "level" (as per the terminology of applicant's claim 1). In contrast, applicants' lookup table feature explains how to identify one of the predefined levels to satisfy a memory allocation request. Clearly, these are fundamentally different problems/tasks.

The Examiner has also cited McMahon at 2:42-46 against claims 3 and 4 (and 10). These claims relate to entirely different features. Claims 3 and 4 recite how different levels are predefined and, therefore, if considered alone and separately, one might understand why the Examiner considers 2:42-46 of McMahon to be relevant. However, claim 10 (now amended claim 1) relates to something else entirely, namely, how to select one of the predefined levels in response to a memory allocation request. Clearly, McMahon at 2:42-46 cannot be considered to anticipate all these different features at the same time.

Regarding McMahon's step 110 in Fig. 2, this step relates to the rounding up of a memory request. Applicants' invention also envisages similar rounding as one feature (see page 8, lines 16-17 of the application). However, rounding, *per se*, is something entirely different from using a lookup table to identify one of several predefined levels containing a segment of a size equal to or larger than the requested memory block.

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In fact, rounding has no effect on the subsequent selection of a memory block for allocation (both according to McMahon and the present invention). The rounding merely ensures size consistency between the requested block size and the predefined block sizes.

In summary, McMahon fails to disclose or suggest a lookup table for determining the lowest of a number of levels containing a segment of a size equal to or larger than a requested memory block, let alone performing this determination on the basis of the most significant set bit of a binary data set indicative of the size of the requested memory block, as recited by amended claims 1 and 17.

Regarding original claim 25 (now amended claim 17) relating to the generation of the lookup table, the Examiner has referred to the coding scheme in Table 2 at col. 14 of McMahon. But this table is entirely different from the applicants' claimed lookup tables. That is, McMahon's Table 2 includes a mere coding scheme, namely, a coding scheme for the size of small virtual blocks. There is no suggestion that this table is used to identify the lowest of a number of levels containing a segment of the size equal to or larger than a requested memory block, let alone performing this determination on the basis of the most significant set bit of a binary data set indicative of the size of the requested memory block, as required by the presently claimed invention. The only analogy between McMahon's Table 2 and applicants' lookup table is that they are both tables.

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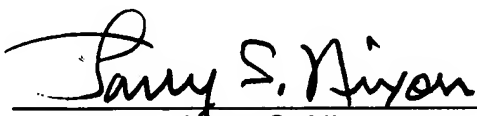
It is noted that the Examining Division of the EPO has now explicitly acknowledged that McMahon does not disclose a lookup table such as used by the present invention.

Given the fundamental deficiencies of McMahon as already noted above, it is unnecessary at this time to detail additional deficiencies of this reference with respect to other aspects of the claimed subject matter. Suffice it to note that, as a matter of law, it is impossible to support a rejection based on anticipation unless the cited reference teaches each and every feature of the rejected claim.

Accordingly, this entire application is now believed to be in allowable form, and a formal notice to that effect is earnestly solicited.

Respectfully submitted,

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